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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,065	04/09/2004	Richard S. Norek	NOR.US.6	3064

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT PAPER NUMBER

3726

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/709,065

Applicant(s)

NOREK, RICHARD S.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-6,8,10,12-15 is/are rejected.
- 7) ☒ Claim(s) 7,9 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 and 2, drawn to a two or three layer transition duct, classified in class 138, subclass 137.
  - II. Claims 3-15, drawn to a method of making a multilayer transition duct, classified in class 29, subclass 890.14.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as one not requiring the steps of providing a plurality of pieces of tubular duct material of substantially the same diameter, changing the temperature of at least one of the pieces sufficient to change its diameter by thermal expansion to a degree that permits a cooler piece to fit inside a warmer piece, inserting the cooler piece inside the warmer piece to make multilayer tube material and hydroforming a multilayer transition duct body from the multilayer tube material, as required by the invention of Group II.

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3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Applicant's attorney, **Mr. Phillip E. Decker** on Wednesday, April 13, 2005 a provisional election was made without traverse to prosecute the invention of Group II, claims 3-15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1 and 2 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Claim Objections***

5. Claim 5 is objected to because of the following informalities: "an" should be - - a - - in line 5. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cudini (US 4,759,111) in view of Long (US 3,068,562).

Cudini teaches a method of making a multilayer transition duct body without longitudinal

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welds comprising the steps of providing a plurality of pieces of tubular duct material **11,10** of substantially the same diameter, inserting a first piece **10** inside a second piece **11** to make multilayer tube material, and hydroforming a multilayer transition duct body from the multilayer tube material (col. 4, lines 11-17).

Cudini teaches the invention cited with the exception of changing the temperature of at least one of the pieces sufficient to change its diameter by thermal expansion to a degree that permits a cooler piece to fit inside a warmer piece.

Long teaches heating an outer shell **8** to a high temperature to expand it so that the outer shell can be telescoped over an inner shell **2** (col. 2, lines 35-40) and then hydraulically expanding (col. 2, lines 52-70).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Cudini with the step of changing the temperature of at least one of the pieces sufficient to change its diameter by thermal expansion to a degree that permits a cooler piece to fit inside a warmer piece, in light of the teachings of Long, in order to provide an even more secure attachment between the inner and outer pieces.

8. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cudini in view of Long as applied to claim 3 above, and further in view of Austin et al. (US 5,129,253).

Cudini/Long teach the invention cited with the exception of coating one of the mating surfaces with anti-fretting coating.

Austin et al. teach coating with an anti-fretting coating **13**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the

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invention, to have provided the invention of Cudini/Long with coating one of the mating surfaces with anti-fretting coating, in light of the teachings of Austin et al., in order to help reduce friction related stress.

9. **Claims 5, 6, 8, 10, 12, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz (US 5,649,439) in view of Komiya et al. (US 6,332,346).

Schulz teaches providing at least one bellows thruster **22,24** having a bellows structure, structural welding (col. 2, lines 19-20) a bellows thruster **22,24** to each open end of a duct body **20** such that the duct body **20** is capable of containing internal pressure, removably securing a pressurizing means **28** to at least one of the bellows **22** thrusters capable of pressurizing the inside of a duct body **20**, and hydroforming the transition duct body **20** in a hydroforming (col. 4, lines 1-4) press **40,38** to a pressure less than the capacity of the hydroforming press **40,38**.

Schulz teaches the invention cited with the exception of the bellows thruster being hemispherical.

Komiya et al. teach a bellows thruster **24** that can have various shapes (see figures 4 and 7a-c) including a hemispherical shape.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Schulz with a hemispherical shape, in light of the teachings of Komiya et al., in order to provide a bellows structure that can be easily nested in the hydroforming press.

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Regarding claims 6 and 8, Komiya et al. teach that the bellows structure 4 is uniform around the axis of the hemispherical bellows structure. The bellows is also non-uniform around “the axis” of the hemispherical bellows thruster.

Regarding claim 10, in as much structure claimed, the bellows structure of Komiya et al. is considered to be adapted to supply more lateral force than without bellows.

Regarding claim 12, Schulz teaches a pair of dies 40,38.

Regarding claim 13, the dies of Schulz is “adapted to” form two transition duct bodies in back-to-back arrangement. Furthermore, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have provided a back-to-back arrangement, in order to provide sections of different material properties.

10. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz in view of Komiya et al. as applied to claim 5 above, and further in view of Cudini.

Schulz/Komiya et al. teach the invention cited with the exception of the duct body being a multi-layer transition duct body.

Cudini teaches a multi-layer transition duct body 10,11.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Schulz/Komiya et al. with a multi-layer transition duct body, in light of the teachings of Cudini, in order to provide a structurally stronger multi-layer duct body.



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11. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz in view of Komiya et al. as applied to claim 14 above, and further in view of Austin et al.

Schulz/Komiya et al. teach the invention cited with the exception of coating between an inner and outer layer of the multi-layer transition duct body.

Austin et al. teach coating with an anti-fretting coating **13**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Schulz/Komiya et al. with coating between an inner and outer layer of the multi-layer transition duct body., in light of the teachings of Austin et al., in order to help reduce friction related stress.

#### *Allowable Subject Matter*

12. Claims 7, 9, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Contact Information*

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number (571) 272-4530. The examiner can normally be reached on Monday-Friday between 5:30 a.m.-2:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ  
May 26, 2005

  
**MARC JIMENEZ**  
**PRIMARY EXAMINER**  
5/26/05